WHAT IS CLAIMED IS:

1. A system for predicting occurrence of a neurological event in a patient's body, comprising:

an implant configured to be placed in the body and detect signals indicative of an activity that precedes the neurological event; and

a processing unit configured to process the detected signals so as to predict the neurological event prior to the occurrence.

2. The system of claim 1, wherein the implant is configured to be placed in a patient's brain.

3. The system of claim 2, wherein the implant includes at least one multi-electrode array, the multi-electrode array including a plurality of electrodes.

4 The system of claim 3, wherein the plurality of electrodes are configured to penetrate into neural tissue of the brain to detect electrical signals generated from the neurons.

5. The system of claim 3, wherein the multi-electrode array includes at least one of a recording electrode, a stimulating electrode, and an electrode having recording and stimulating capabilities.

6. The system of claim 3, wherein the at least one multi-electrode array is configured to detect electrical signals indicative of a neural activity preceding the neurological event.

7. The system of claim 2, wherein the implant is configured to detect electrical signals generated from the neurons located proximate the implant.

8. The system of claim 7, wherein the processing unit is configured to convert the detected electrical signals into a recognizable pattern.

9. The system of claim 8, wherein the recognizable pattern includes a formula describing a behavior of the neurons in time and space.

10. The system of claim 7, wherein the implant is configured to isolate individual neuron signals from neighboring neuron signals.

11. The system of claim 7, wherein the detected electrical signals generated from the neurons include electrical spikes.

12. The system of claim 11, wherein the processing unit is configured to characterize a pattern of the electrical spikes that represent a neural activity preceding the neurological event, so as to predict the occurrence of the neurological event.

13. The system of claim 2, wherein the implant is configured to be placed proximate a neural focus in the brain that initiates the neurological event.

14. The system of claim 2, wherein the implant is configured to detect local field potentials of the brain.

15. The system of claim 2, wherein the implant is configured to detect electrocorticogram (ECoG) signals.

16. The system of claim 2, wherein the implant is configured to detect electroencephalogram (EEG) signals.

17. The system of claim 2, wherein the implant is configured to detect DC potentials.

18. The system of claim 2, wherein the implant is configured to detect light generated from the neurons located proximate the implant.

19. The system of claim 2, wherein the implant is configured to detect acoustic waves generated from the neurons located proximate the implant.

20. The system of claim 2, wherein the implant comprises a subdural grid having a plurality of electrode contacts and configured to be placed on a surface of the brain.

21. The system of claim 20, wherein the implant further comprises at least one multi-electrode array.

22. The system of claim 2, wherein the implant includes a movement sensor configured to detect movement of the brain.

23. The system of claim 2, wherein the implant includes a pressure monitoring device for monitoring pressure in the brain.

24. The system of claim 2, wherein the implant includes a temperature monitoring device for monitoring temperature in the brain.

25. The system of claim 2, wherein the implant includes a magnetic resonance monitoring device for monitoring magnetic resonance intensity in the brain.

26. The system of claim 1, wherein the processing unit is configured to characterize the signals that represent the activity preceding the neurological event.

27. The system of claim 1, further comprising a storage device for storing the signals that represent the activity preceding the neurological event.

28. The system of claim 27, wherein the processing unit is configured to compare the detected signals with the signals stored in the storage device.

29. The system of claim 1, wherein the processing unit includes a recording device for recording the detected signals.

30. The system of claim 1, wherein the implant is configured to detect biological or physiological signals generated within the patient's body.

31. The system of claim 1, further comprising a sensor for detecting other signals generated from the body, the sensor is configured to communicate with the processing unit.

32. The system of claim 31, wherein the processing unit is configured to compare the signals detected by the implant and the other signals detected by the sensor.

33. The system of claim 1, wherein the processing unit is configured to differentiate the signals indicative of the activity that precedes the neurological event from signals resulting from normal activities.

34. The system of claim 1, wherein the processing unit is configured to output information relating to a patient's condition with respect to the neurological event.

35. The system of claim 34, wherein the processing unit includes an indicator for conveying the information to the patient.

36. The system of claim 34, further comprising an external device being in communication with the processing unit, the external device configured to display the information relating to the patient's condition with respect to the neurological event.

37. The system of claim 36, wherein the processing unit is configured to receive an input signal from the external device.

38. The system of claim 36, wherein the external device includes at least one of a visual indicator, a tactile transducer, an auditory indicator, and a light emitting device.

39. The system of claim 34, wherein the information includes a warning signal that the neurological event is expected to occur.

40. The system of claim 34, wherein the information includes a time remaining until the occurrence of the neurological event.

41. The system of claim 34, wherein the information includes an occurrence probability of the neurological event.

42. The system of claim 34, wherein the information includes severity of the neurological event.

43. The system of claim 34, wherein the information includes a patient's current condition in comparison with a normal target condition.

44. The system of claim 34, wherein the information includes instructions for preventing the neurological event from occurring.

45. The system of claim 34, wherein the information includes a stimulating signal provided to the patient to cause a movement of a portion of the patient's body.

46. The system of claim 45, wherein the stimulating signal is sent to the implant.

47. The system of claim 45, wherein the portion of the patient's body is a finger.

48. The system of claim 1, wherein, upon predicting the occurrence of the neurological event, the processing unit is configured to generate a control signal to suppress, dampen, or delay the neurological event.

49. The system of claim 48, wherein the control signal includes an electrical current sent to a patient's brain to stimulate at least a portion of the brain.

50. The system of claim 48, wherein the control signal is configured to stimulate a central nervous system and/or a peripheral nervous system.

51. The system of claim 48, further comprising a drug delivery system, wherein the processing unit sends a signal to the drug delivery system to deliver a therapeutic agent or drug to at least a portion of the patient's body.

52. The system of claim 1, wherein, upon predicting the occurrence of the neurological event, the processing unit is configured to hyperpolarize at least a portion of the brain.

53. The system of claim 44, wherein the processing unit sends a DC bias current to a patient's brain to hyperpolarize the at least a portion of the brain.

54. The system of claim 1, wherein:

the implant includes one or more electrodes; and

upon predicting the occurrence of the neurological event, the processing unit is configured to reduce the impedance between the one or more electrodes.

55. The system of claim 1, further comprising a storage device containing a target signal indicative of the activity that precedes the neurological event.

56. The system of claim 66, wherein the target signal includes a database containing a set of previously detected signals indicative of the activity that precedes the neurological event.

57. The system of claim 66, wherein the processing unit is configured to compare the detected signals with the target signal.

58. The system of claim 66, wherein the processing unit is configured to modify the target signal.

59. The system of claim 1, wherein the neurological event is an epileptic symptom.

60. The system of claim 51, wherein the implant is placed proximate an epileptic focus of a brain.

61. The system of claim 1, wherein the neurological event is an undesired activity.

62. The system of claim 61, wherein the undesired activity includes a criminal activity.

63. The system of claim 61, wherein the implant is configured to be placed in a brain and measure readiness potential of the brain, indicative of occurrence of the undesired activity.

64. A method for treating a neurological event in a patient, comprising:

placing an implant in the patient's body;

detecting signals indicative of an activity that precedes the neurological event; and

predicting occurrence of the neurological event based on the detected signals.

65. The method of claim 64, further comprising placing the implant in the patient's brain.

66. The method of claim 65, wherein the remote implant includes at least one multi-electrode array, the multi-electrode array including a plurality of electrodes.

67. The method of claim 66, wherein the plurality of electrodes are configured to penetrate into neural tissue of the brain to detect electrical signals generated from the neurons.

68. The method of claim 66, wherein the multi-electrode array includes at least one of a recording electrode, a stimulating electrode, and an electrode having recording and stimulating capabilities.

69. The method of claim 66, further comprising detecting electrical signals with the multi-electrode array, the electrical signals being indicative of a neural activity preceding the neurological event.

70. The method of claim 66, further comprising detecting electrical signals generated from the neurons located proximate the implant.

71. The method of claim 70, further comprising processing the detected electrical signals to convert the signals into a recognizable pattern.

72. The method of claim 71, wherein the recognizable pattern includes a formula describing a behavior of the neurons in time and space.

73. The method of claim 66, further comprising processing the detected electrical signals to isolate individual neuron signals from neighboring neuron signals.

74. The method of claim 66, wherein the detected electrical signals generated from the neurons include electrical spikes.

75. The method of claim 65, wherein the implant is placed proximate a neural focus in the brain that initiates the neurological event.

76. The method of claim 65, wherein the implant is configured detect local field potentials of the brain.

77. The method of claim 65, wherein the implant is configured to detect electrocorticogram (ECoG) signals.

78. The method of claim 65, wherein the implant is configured to detect electroencephalogram (EEG) signals.

79. The method of claim 65, wherein the implant is configured to detect DC potentials.

80. The method of claim 65, wherein the implant is configured to detect light generated from the neurons located proximate the implant.

81. The method of claim 65, wherein the implant is configured to detect acoustic waves generated from the neurons located proximate the implant.

82. The method of claim 65, wherein the implant comprises a subdural grid having a plurality of electrode contacts, the subdural grid being placed on a surface of the brain.

83. The method of claim 82, wherein the implant further comprises at least one multi-electrode array.

84. The method of claim 65, wherein the implant includes a movement sensor configured to detect movement of the brain.

85. The method of claim 65, wherein the implant includes a pressure monitoring device for monitoring pressure in the brain.

86. The method of claim 65, wherein the implant includes a temperature monitoring device for monitoring temperature in the brain.

87. The method of claim 65, wherein the implant includes a magnetic resonance monitoring device for monitoring magnetic resonance intensity in the brain.

88. The method of claim 64, further comprising processing the detected signals to characterize the signals that represent the activity preceding the neurological event.

89. The method of claim 64, further comprising storing the signals that represent the activity preceding the neurological event into a storage device.

90. The method of claim 89, further comprising comparing the detected signals with the signals stored in the storage device.

91. The method of claim 64, further comprising comparing the detected signals with other signals detected by a sensor in the patient's body.

92. The method of claim 64, further comprising recording the detected signals.

93. The method of claim 64, wherein the detected signals include biological or physiological signals generated within the patient's body.

94. The method of claim 64, further comprising differentiating the signals indicative of the activity that precedes the neurological event from signals resulting from normal activities.

95. The method of claim 64, further comprising outputting information relating to the patient's condition with respect to the neurological event.

96. The method of claim 95, wherein outputting information includes conveying the information to the patient.

97. The method of claim 95, wherein the information includes a warning signal that the neurological event is expected to occur.

98. The method of claim 95, wherein outputting information includes communicating with an external device to convey the information.

99. The method of claim 116, wherein the external device includes at least one of a visual indicator, a tactile transducer, and an auditory indicator.

100. The method of claim 95, wherein the information includes a time remaining until the occurrence of the neurological event.

101. The method of claim 95, wherein the information includes an occurrence probability of the neurological event.

102. The method of claim 95, wherein the information includes severity of the neurological event.

103. The method of claim 95, wherein the information includes a patient's current condition in comparison with a normal target condition.

104. The method of claim 95, wherein the information includes instructions for preventing the neurological event from occurring.

105. The method of claim 95, wherein outputting the information includes causing a movement of a portion of the patient's body.

106. The method of claim 105, wherein causing the movement includes sending a stimulating signal to the implant.

107. The method of claim 105, wherein the portion of the patient's body includes a finger.

108. The method of claim 64, further comprising, upon predicting the occurrence of the neurological event, generating a control signal for treating the patient.

109. The method of claim 108, wherein the control signal controls, suppresses, dampens, and/or delays the neurological event.

110. The method of claim 108, wherein generating a control signal includes generating a stimulating electrical current and sending the current to a portion of the patient's body.

111. The method of claim 110, wherein the portion of the patient's body includes the patient's brain.

112. The method of claim 108, wherein generating a control signal includes generating a signal to deliver a drug or a therapeutic agent to at least a portion of the patient's body.

113. The method of claim 64, further comprising, upon predicting the occurrence of the neurological event, hyperpolarizing at least a portion of the patient's brain.

114. The method of claim 113, wherein hyperpolarizing includes sending a DC bias current to the patient's brain to hyperpolarize the at least a portion of the brain.

115. The method of claim 64, wherein:

the implant includes at least one electrode; and

upon predicting the occurrence of the neurological event, the processing unit is configured to short the at least one electrode.

116. The method of claim 64, further comprising providing a target signal indicative of the activity that precedes the neurological event.

117. The method of claim 116, wherein the target signal includes a database containing a set of previously detected signals indicative of the activity that precedes the neurological event.

118. The method of claim 116, further comprising comparing the detected signals with the target signal.

119. The method of claim 116, further comprising modifying the target signal.

120. The method of claim 119, wherein modifying the target signal includes performing an adaptive processing of the target signal.

121. The method of claim 119, wherein the adaptive processing includes:

determining whether the neurological event occurred, regardless of whether the occurrence was predicted;

determining whether the occurrence or nonoccurrence of the neurological event was mistakenly predicted; and

modifying the target signal based on whether the occurrence or nonoccurrence of the neurological event was mistakenly predicted.

122. The method of claim 64, wherein the neurological event is an epileptic symptom.

123. The method of claim 122, further comprising placing the implant proximate an epileptic focus of a brain.

124. The method of claim 64, further comprising preprocessing the detected signal.

125. The method of claim 124, wherein preprocessing includes measuring background signals and calibrating the detected signal based on the measured background signals.

126. The method of claim 124, wherein preprocessing includes at least one of: noise filtering, impedance matching, rectifying, integrating, differentiating, discretizing, and amplifying the detected signals.

127. A system for detecting a neurological event in a patient's body, comprising:

at least one electrode placed within a patient's brain and configured to detect electrical signals generated from the brain; and

a control module in communication with the at least one electrode and comprising:

an event detection device configured to identify occurrence of the neurological event based on the detected electrical signals; and

a data recording device including a counter synchronized with an external clock;

wherein, upon identifying occurrence of the neurological event by the event detection device, the recording device is configured to record the detected electrical signals and a value of the counter.

128. The system of claim 127, wherein the value of the counter is configured to increase by one in every predetermined time interval.

129. The system of claim 127, further comprising an external device configured to communicate with the control module, wherein the external device is configured to receive the value of the counter and the detected electrical signals from the remote module.

130. The system of claim 129, wherein the external device is configured to convert the value of the counter to a real-time value.

131. The system of claim 129, wherein the external device is configured to transmit a start signal to the control module to upload the value of the counter and the detected electrical signals to the external device or other processing device.

132. The system of claim 129, wherein the external device is configured to receive a start signal to the remote module or other processing device to download the value of the counter and the detected electrical signals from the control module.

133. The system of claim 127, wherein the at least one electrode includes at least one multi-electrode array, the multi-electrode array including a plurality of electrodes.

134. The system of claim 133, wherein the plurality of electrodes are configured to penetrate into neural tissue of the brain to detect electrical signals generated from the neurons.

135. The system of claim 127, wherein the at least one electrode is configured to detect local field potentials of the brain.

136. The system of claim 127, wherein the at least one electrode is configured to detect electrocorticogram (ECoG) signals.

137. The system of claim 127, wherein the at least one electrode is configured to detect electroencephalogram (EEG) signals.

138. A device for placing an implant in a patient's body, comprising:

an elongated member having a distal sleeve, the distal sleeve having a first portion and a second portion and configured to receive the implant between the first portion and the second portion, the first portion and the second portion being configured to move relative to each other,

wherein at least the first portion includes an expandable member so as to push the implant towards an implant site in the patient's body.

139. The device of claim 138, wherein the elongated member is configured to be bent or turned.

140. The device of claim 138, wherein the elongated member is sufficiently flexible to traverse through tortuous paths within the patient's body.

141. The device of claim 138, further comprising the implant, wherein the implant includes a plurality of electrodes for placement in a brain of the patient, and wherein at least one of the first portion and the second portion is configured to cover the plurality of electrodes.

142. The device of claim 138, wherein the first portion is inflatable.

143. The device of claim 138, further comprises a substantially rigid backing member, wherein the first portion is configured to push against the backing member to expand towards an implant site.

144. The device of claim 138, further comprising a grasping member to grasp the implant.

145. The device of claim 138, wherein at least a portion of the device is made of a bioabsorbable material.

146. A system for detecting occurrence of an undesired activity in a person, comprising:

an implant configured to be placed in the body and detect signals indicating that the undesired activity is occurring or is about to occur; and

a processing unit configured to process the detected signals and generate a control signal to prevent the undesired activity and/or warn the person or a third person.

147. The system of claim 146, wherein the control signal is at least one of an electrical signal and a chemical signal.

148. The system of claim 146, wherein the control signal is inputted to the brain.

149. The system of claim 146, wherein the control signal is inputted to at least a portion of the central nervous system and/or peripheral nervous system to prevent the undesired activity.

150. A system for detecting and treating a neurological event in a patient's body, comprising:

an implant configured to be placed in the body and detect signals generated from the body;

an external device; and

a processing unit configured to process the detected signals and generate a control signal that controls the operation of the external device.

151. The system of claim 151, wherein the external device is a movement device, the movement of the device being controlled by the processing unit.